

## CLAIMS

## [Claim 1]

A method of accepting commission production of DNA chips, wherein nucleic acid probes having specific base sequences are immobilized in independent areas on a surface of a substrate thereby to produce the DNA chips, which comprises the steps of:

- receiving the type and the set number of a DNA chip through a communication network;
- 10        setting an arrangement of nucleic acid probes in individual areas;
- displaying a drawing for showing the nucleic acid probes and probe property data at individual nucleic acid probe positions on a screen;
- 15        sending the display screen through the communication network for confirmation; and
- accepting an order for production based on a confirmed screen display through the communication network.

## 20        [Claim 2]

A method of accepting commission production of DNA chips, wherein nucleic acid probes having specific base sequences are immobilized in independent areas on a surface of a substrate thereby to produce the DNA chips, which comprises the steps of:

- receiving the type and the set number of a DNA chip through a communication network;
- setting an arrangement of nucleic acid probes in

individual areas;

displaying a drawing for showing the nucleic acid probes and probe property data at individual nucleic acid probe positions on a screen;

5        sending the display screen through the communication network for confirmation;

providing price information from a memory device for storing the price information; and

10        accepting an order for production based on a confirmed screen display through the communication network.

[Claim 3]

15        A method of accepting commission production of DNA chips, wherein nucleic acid probes having specific base sequences are immobilized in independent areas on a surface of a substrate thereby to produce the DNA chips, which comprises the steps of:

receiving the type and the set number of a DNA chip through a communication network;

20        setting an arrangement of nucleic acid probes in individual areas;

displaying a drawing for showing the nucleic acid probes and probe property data at individual nucleic acid probe positions on a screen;

25        sending the display screen through the communication network for confirmation;

accepting an order for production based on a confirmed screen display through the communication

network;

calculating the delivery date while comparing content of the order, an inventory status, and a production schedule with one another; and

5 providing the delivery information through the communication network.

[Claim 4]

A method of accepting commission production of DNA chips, wherein nucleic acid probes having specific base  
10 sequences are immobilized in independent areas on a surface of a substrate thereby to produce the DNA chips, which comprises the steps of:

receiving the type and the set number of a DNA chip through a communication network;

15 setting an arrangement of nucleic acid probes in individual areas;

displaying a drawing for showing the nucleic acid probes and control conditions at individual nucleic acid probe positions on a screen;

20 sending the display screen through the communication network for confirmation; and

accepting an order for production and analysis based on a confirmed screen display through the communication network.

25 [Claim 5]

A method of accepting commission production of DNA chips, wherein nucleic acid probes having specific base sequences are immobilized in independent areas on a

surface of a substrate thereby to produce the DNA chips,  
which comprises the steps of:

receiving the type and the set number of a DNA chip  
through a communication network;

5        setting an arrangement of nucleic acid probes in  
individual areas;

displaying temperatures of the individual areas, and  
temperature control conditions on a screen;

10       sending the display screen through the communication  
network for confirmation; and

accepting an order for production and analysis based  
on a confirmed screen display through the communication  
network.

[Claim 6]

15       A method of accepting commission production of DNA  
chips, wherein nucleic acid probes having specific base  
sequences are immobilized in independent areas on a  
surface of a substrate thereby to produce the DNA chips,  
which comprises the steps of:

20       receiving the type and the set number of a DNA chip  
through a communication network;

setting an arrangement of nucleic acid probes in  
individual areas;

25       displaying temperatures of the individual areas, and  
temperature control conditions on a screen;

sending the display screen through the communication  
network for confirmation;

accepting an order for production and analysis based

on a confirmed screen display through the communication network; and

setting the arrangement of the nucleic acid probes in the individual areas based on a tendency of reducing dispersion of the temperatures in the individual areas.

[Claim 7]

A method of accepting commission production of DNA chips, wherein nucleic acid probes having specific base sequences are immobilized in independent areas on a surface of a substrate thereby to produce the DNA chips, which comprises the steps of:

receiving the type and the set number of a DNA chip through a communication network;

setting an arrangement of nucleic acid probes in individual areas;

displaying temperatures of the individual areas, and temperature control conditions on a screen;

sending the display screen through the communication network for confirmation;

accepting an order for production and analysis based on a confirmed screen display through the communication network; and

constituting an experiment protocol display screen by composing a nucleic acid probe arrangement screen with an experiment control condition display screen.

[Claim 8]

A method of accepting commission production of DNA chips, wherein nucleic acid probes having specific base

sequences are immobilized in independent areas on a surface of a substrate thereby to produce the DNA chips, which comprises the steps of:

receiving the type and the set number of a DNA chip  
5 through a communication network;

setting an arrangement of nucleic acid probes in individual areas;

displaying temperatures of the individual areas, and temperature control conditions on a screen;

10 sending the display screen through the communication network for confirmation;

accepting an order for production and analysis based on a confirmed screen display through the communication network; and

15 calculating a price while referring to a probe information file, an inventory information file, an order information file, and a setting information file for nucleic acid probe arrangement.

[Claim 9]

20 A method of accepting commission production of DNA chips, wherein nucleic acid probes having specific base sequences are immobilized in independent areas on a surface of a substrate thereby to produce the DNA chips, which comprises the steps of:

25 an order input device for receiving the type and the set number of a DNA chip through a communication network;

an arrangement setting device for setting an arrangement of nucleic acid probes in individual areas;

a screen device for displaying the probe arrangement and probe properties in the individual areas;

a device for sending the display screen through the communication network for confirmation; and

5 a device for displaying a part of or the all of the content of a received order.

[Claim 10]

A system of accepting commission production of DNA chips, wherein an order relating to production of DNA  
10 chips is received from customers, and it is required to control temperature according to melting temperature ( $T_m$ ) value of the nucleic acid probes comprising:

an arrangement setting device for setting an arrangement of nucleic acid probes recorded in an order  
15 information file in individual areas on a chip;

a registration processing device for registering the arrangement of the nucleic acid probes in the individual areas, and control conditions at individual probe positions to an image information file;

20 a screen display device mapping a drawing for indicating the probe arrangement and the control conditions at the individual probe positions from the image information file on individual areas on a screen for indicating a DNA chip; and

25 a production/analysis order accepting device for sending confirmation information using the display screen through a communication network, and accepting an order for production and analysis based on a confirmed screen

display through the communication network.

[Claim 11]

A system of accepting commission production of DNA chips, wherein an order relating to production of DNA  
5 chips from customers, and it is required to control temperature according to melting temperature ( $T_m$ ) value of the nucleic acid probes:

an arrangement setting device for setting an arrangement of nucleic acid probes recorded in an order  
10 information file in individual areas on a chip;

a registration processing device for registering the arrangement of the nucleic acid probes in the individual areas, and control conditions at individual probe positions to an image information file;

15 a screen display device mapping a drawing for indicating the probe arrangement and the control conditions at the individual probe positions from the image information file on individual areas on a screen for indicating a DNA chip;

20 a production/analysis order accepting device for sending confirmation information using the display screen through a communication network, and accepting an order for production and analysis based on a confirmed screen display through the communication network; and

25 a price calculation processing device for calculating a price while referring to a probe information file for storing the arrangement of the nucleic acid probes in individual areas and the control conditions at individual



probe positions, an inventory information file, and the order information file.

[Claim 12]

5 A system of accepting commission production of DNA chips, wherein the nucleic acid probes including specific base sequences are immobilized in independent areas on a surface of a substrate to produce the DNA chips or an order relating to production of DNA chips from customers, and it is required to control temperature according to  
10 melting temperature ( $T_m$ ) value of the nucleic acid probes, and the calculated delivery date is displayed on a screen display device:

a delivery date calculation processing device for calculating a delivery date by comparing the content of  
15 an order, a inventory status, and a production schedule with one another.